M.S. in Internet Engineering

Degree Requirements

The bridge program curriculum requires a basic knowledge of computer and communications fundamentals.

All master's degree candidates must complete a minimum of 30 credits, 9 in core courses and 21 in elective courses; or 21 credits must be from ECE courses.

The required courses provide the basics of Internet Engineering. Electives are to be chosen from the available course pool to tailor the program to the student's professional needs and interests. This program utilizes graduate courses in Electrical and Computer Engineering, Computer and Information Science, Management Information Systems, and Management Programs at NJIT. They provide the necessary blend of education required for appropriate strength in Internet Engineering.

M.S. in Internet Engineering (courses only)

Code	Title	Credits
Bridge Courses [1]		
ECE 333	Signals and Systems	3
ECE 481	Digital Communications Systems	3
CS 505	Programming, Data Structures, and Algorithms	3
ECE 251	Digital Design	3
Total Credits		**12**

[1]   Bridge courses are usually selected from this list, but some additional bridge courses, appropriate to each student's background, may be required.

Code	Title	Credits
Core Courses		
ECE 637	Internet Protocols and their Evolution with Artificial Intelligence	3
ECE 683	Cloud and IoT Networking and Security	3
CS 602	Java Programming	3
Electives [1]		
Select seven of the following:		21
ECE 673	Random Signal Analysis	
ECE 681	High-Performance Network Function, Data Center, and Virtualization	
ECE 638	Network Management and Security	
ECE 639	Principles of Broadband Networks	
ECE 645	Design of Wireless Networks: 5G Architecture and Services	
ECE 636	Computer Networking Laboratory	
MGMT 620	Strategic Management of Technological Innovation	
MIS 625	Management Strategies for E-Commerce	
ECE 783	Computer Communication Networks	
ECE 788	Selected Topics in Electrical and Computer Engineering	
or ECE 789	Selected Topics in Electrical and Computer Engineering II	
Seminar		
ECE 791	Graduate Seminar [2]	0
Total Credits		**30**

[1]   Other (new) courses related to Internet Engineering may be selected as electives with approval from the Graduate Advisor
[2]   Two semesters are required.

M.S. in Internet Engineering (Master's project)

Code	Title	Credits
Bridge Courses [1]		
ECE 333	Signals and Systems	3

ECE 481	Digital Communications Systems	3
CS 505	Programming, Data Structures, and Algorithms	3
ECE 251	Digital Design	3
Total Credits		**12**

[1]   Bridge courses are usually selected from this list, but some additional bridge courses, appropriate to each student's background, may be required.

Code	Title	Credits
Core Courses		
ECE 637	Internet Protocols and their Evolution with Artificial Intelligence	3
ECE 683	Cloud and IoT Networking and Security	3
CS 602	Java Programming	3
Project		
ECE 700B	Master's Project	3
Electives [1]		
Select six of the following:		18
ECE 673	Random Signal Analysis	
ECE 681	High-Performance Network Function, Data Center, and Virtualization	
ECE 638	Network Management and Security	
ECE 639	Principles of Broadband Networks	
ECE 645	Design of Wireless Networks: 5G Architecture and Services	
ECE 636	Computer Networking Laboratory	
MGMT 620	Strategic Management of Technological Innovation	
MIS 625	Management Strategies for E-Commerce	
ECE 783	Computer Communication Networks	
ECE 788	Selected Topics in Electrical and Computer Engineering	
or ECE 789	Selected Topics in Electrical and Computer Engineering II	
Seminar		
ECE 791	Graduate Seminar [2]	0
Total Credits		**30**

[1]   Other (new) courses related to Internet Engineering may be selected as electives with approval from the Graduate Advisor
[2]   Two semesters are required.

M.S. in Internet Engineering (Master's thesis)

Code	Title	Credits
Bridge Courses [1]		
ECE 333	Signals and Systems	3
ECE 481	Digital Communications Systems	3
CS 505	Programming, Data Structures, and Algorithms	3
ECE 251	Digital Design	3
Total Credits		**12**

[1]   Bridge courses are usually selected from this list, but some additional bridge courses, appropriate to each student's background, may be required.

Code	Title	Credits
Core Courses		
ECE 637	Internet Protocols and their Evolution with Artificial Intelligence	3
ECE 683	Cloud and IoT Networking and Security	3
CS 602	Java Programming	3
Thesis		

ECE 701B & 701B	Master's Thesis and Master's Thesis	6
or ECE 701C	Master's Thesis	
Electives [1]		
Select five of the following:		15
ECE 673	Random Signal Analysis	
ECE 681	High-Performance Network Function, Data Center, and Virtualization	
ECE 638	Network Management and Security	
ECE 639	Principles of Broadband Networks	
ECE 645	Design of Wireless Networks: 5G Architecture and Services	
ECE 636	Computer Networking Laboratory	
MGMT 620	Strategic Management of Technological Innovation	
MIS 625	Management Strategies for E-Commerce	
ECE 783	Computer Communication Networks	
ECE 788	Selected Topics in Electrical and Computer Engineering	
or ECE 789	Selected Topics in Electrical and Computer Engineering II	
Seminar		
ECE 791	Graduate Seminar [2]	0
Total Credits		**30**

[1]   Other (new) courses related to Internet Engineering may be selected as electives with approval from the Graduate Advisor

[2]   Two semesters are required.